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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/581,289

06/01/2006

Michel Serillon

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3168

23405

7590

10/29/2008

HESLIN ROTHENBERG FARLEY & MESITI PC  
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EXAMINER

TORRES VELAZQUEZ, NORCA LIZ

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

10/29/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/581,289	<b>Applicant(s)</b> SERILLON, MICHEL	
	<b>Examiner</b> Norca L. Torres-Velazquez	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>060106</u> .  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-9, 11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over CLAEUS (WO 97/37835).

The CLAEUS reference teaches a woven cloth based on high-tenacity yarns used for reinforcing parts that comprise weft threads arranged in a weft direction that are not perpendicular to warp threads as the reference teaches relates to a reinforcement material that comprises a first layer that at least consists of a plurality of substantially parallel filament bundles and at least one second layer that consists of a plurality of substantially parallel filament bundles. The second layer lies at an angle relative to the first layer of between substantially 60° and 120°. The first layer and the second layer are mutually bonded by means of an adhesive. The filament bundles are the weft threads of a woven fabric or web. (Abstract) It is noted that the reference teaches that in the case of a woven fabric the weft thread will preferably be displaced relative to the warp direction after weaving. Then, once the woven fabrics or webs have been brought into the suitable form, two or more layers are mutually fixed by means of an adhesive. (Page 3, lines 1-10) The reference further teaches the use of glass fiber material for the construction of the filament bundles and of the warp threads. (Refer to page 3, lines 33-37) With regards to claim 10, the reference teaches using thermoplastic or thermosetting powder or a

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glue to bond the layers. The reference further teaches using thermosetting resins such as polyester, epoxy and phenol to impregnate the material. (Refer to page 3, lines 9-10 and 25-27)

With regards to the claimed ratio  $T_c \cdot D_c / T_t \cdot D_t$ ; it is noted that on Examples 1 and 3 the reference discloses a woven fabric made with 3.5 glass fibers of 68 tex in the warp and 2.4 glass rovings of 600 tex in the weft, the weft threads are displaced relative to the warp threads such that an angle of  $45^\circ$  is formed between the two. A second woven fabric with the same composition is laid in reverse position onto the first woven fabric. The warp has a basis weight of 50 gsm and the weft a basis weight of 200 gsm. (Refer to Pages 5 and 6) Based on the information provided in the examples the  $T_c \cdot D_c / T_t \cdot D_t$  is of about 0.12. It is further noted that the reference teaches that the width, angle and weight of the material can be varied as desired and that heavier threads can be used whereby the material can be less expensive. (Refer to page 4, lines 19-27) “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” In *re* *Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) It is well settled that determination of optimum values of cause effective variables such as linear density is within the skill of one practicing the art. In *re* *Boesch*, 205 USPQ 215 (CCPA 1980). Thus, it would have been obvious to one having ordinary skill in the art to provide a woven cloth of the present invention and provide it with warp threads that have a higher linear density motivated by the desire of providing a product that will have higher strength in the warp directions and would meet the claimed ratio of  $T_c \cdot D_c / T_t \cdot D_t$ .

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3. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over CLAEUS (WO 97/37835) as applied to claim 1 above, and further in view of INOBUCHI et al. (US 5,168,006).

While CLAEUS teaches woven constructions, it fails to specifically teach the use of a twill weave.

INOBUCHI et al. also relates to a woven fabric used for production of fiber-reinforced thermoplastic resin laminates in which the reinforcement yarn comprise glass-fibers and are woven in a plain weave, specifically basket or twill weave. (Refer to Abstract; Col. 2, lines 35-57)

It would have been obvious to one having ordinary skill in the art of fiber-reinforced laminate by compression molding of woven fabrics that have been shown to have high strength as taught by INOBUCHI et al. (Abstract)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-5:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Norca L. Torres-Velazquez/  
Primary Examiner, Art Unit 1794

October 27, 2008